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| 09/701,653 | 11/30/2000 | Fabrice Bancetl | Q61879 | 5626 |

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Sughrue Mion Zinn
Macpeak & Seas
Suite 800
2100 Pennsylvania Avenue NW
Washington, DC 20037-3213

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| EXAMINER |
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PATEL, HARESH N

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| ART UNIT | PAPER NUMBER |
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2126

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,653

Applicant(s)

BANCTEL ET AL.

Examiner

Haresh Patel

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 1-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: .

DETAILED ACTION

1. Claims 1-9 are presented for examination.

Priority

2. Applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d) or (f), is acknowledged.

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.

Art Unit: 2126

- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected. Some of the informalities are:

- i. The specification needs to be organized as stated above.

Appropriate correction is required.

- 4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "A method to implement a tree of distributed objects in different processes using a data structure at the root level of the tree".

- 5. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;

Art Unit: 2126

- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The abstract of the disclosure is objected to because it does not contain key terms involved in the invention like. The abstract does not clearly state the goal of the invention. Also, the "Figure 2" label needs to be removed. Correction is required. See MPEP § 608.01(b).

Drawings

6. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

7. An initialed and dated copy of Applicant's IDS form 1449, Paper No. 3, is attached to the instant Office action.

Claim Objections

8. Claims 4, 5, 7 and 8 are objected to because it contains "a method according to any preceding claim", which is not allowed.

9. Claim 9 is objected to because it contains "a method according to any of claims 1 to 7", which is not allowed.

Art Unit: 2126

10. Claims 1 – 9 are objected to because they contain terms that refer to the figures and which are not well known in the art, like, central directory (Pr0), father object (A), physical address (pB), central directory (/A/C), logical name (/A), information (/B) etc.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Rich et al. 6,457,065 (Hereinafter Rich).

13. As per claim 1, Rich teaches the following:

a method of implementing a tree of distributed objects in different processes, there being a central directory (Pr0) adapted to store information on objects in a data structure (TabO) at the root of the tree, characterized in that it includes a step consisting of assigning to a father object (A) in a process, for each son object (B):

information referring back to said central directory if the son object is not contained in the same process (e.g., Nested transactions are supported, where each child transaction may commit or roll back independently, abstract, a technique for replicating objects in distributed object systems to reduce network round trips during program execution and thereby improve

Art Unit: 2126

system performance, col. 1, lines 20 – 25, creating a tree structure to represent one or more subtransactions of one or more concurrent and/or nested transactions which may access one or more objects stored at a remote persistent object store in the distributed object system, wherein each node of the tree structure maintains an independent view comprising a version of each object available at this node; requesting, by a selected one of the subtransactions, access to a selected one of the stored objects; determining whether the selected object is available in a particular independent view maintained by a node in which the selected subtransaction is executing; obtaining a version of the selected object and making the obtained version available to the particular independent view when the determining has a negative result; temporarily making one or more modifications to the selected object, the modifications requested by the selected subtransaction, by making the modifications to the particular independent view of the selected subtransaction; committing the modifications upon a commit request; and performing a rollback of the modifications upon a rollback request, col. 1 line 20 – col. 4, line 67),

14. As per claims 2-~~8~~¹¹ Rich teaches the following:

if the central directory (Pr0) receives a request for access to a first object (C) identified by a logical name identifying a logical access path of said first object from the central directory (/A/C), it searches its data structure for the logical name received in order to send the request directly to said object or, if said logical name is not in its directory, it searches for a logical name (/A) with the longest character string equal to a first part of the character string of the logical name received, in order to send to a father object determined in this way the request relating to the first object, by providing said father object with information (/B) corresponding to the logical

Art Unit: 2126

access path of the first object relative to the father object (e.g., The logical transaction model for a replicated distributed object system, as defined by the present invention, forms a tree of nested transactions. A physical node may have nodes of transaction trees for multiple transactions, and may be a parent for some transactions while being a child for other transactions. The present invention uses these nested transaction trees to manage changes to the replicas, as well as actual changes to the remote objects in the persistent store, resulting from one or more concurrent and/or nested transactions. (Note that the present invention may be used in a computing system specifically designed for use with the present invention, or it may be used in a more general transactional system by making appropriate modifications to the code executing on the server and client nodes, col. 9, line 1 – col. 22, line 47)

the father object which receives said request sends the request to said first object if it is a son object of its process or returns a message to the central directory, the central directory manages the redundancy of the processes by selecting one of several processes containing the requested object, if a father object of a process receives request relating to a son object directly it returns that request to the central directory if said son object is not contained in its process, the son object being identified in said request by a logical name defining the logical access path of that object from said father object, characterized in that said father object returns said request to the central directory with the character string of said logical name preceded by the character string corresponding to its own logical name defining its logical access path from the central directory, the central directory contains at least information relating to each root object of each process (e.g., multiple nested transactions may be managed according to the approach and structure defined in the first related invention. A shared transaction 510 is provided at the top of

Art Unit: 2126

the tree. One such shared transaction exists at all times within an application using the present invention when this optional optimization is implemented. (Otherwise, when this optimization is not used, each top-level transaction has a separate tree structure.) This shared transaction 510 is shown in FIG. 5 as being the parent transaction for two child transactions 520 and 570. Both transactions 520 and 570 are top-level transactions. Within the type of complex business application typically found in an enterprise computing environment, there may be many more than two top-level transactions: two are used in FIG. 5 for illustrative purposes only. Whenever a new top-level transaction is created within the application, it becomes a child of the shared transaction 510. When a top-level transaction completes by either committing or rolling back, it is removed from the transaction tree 500, so that the shared transaction 510 has one less child. The subtree structures shown in FIG. 5 beneath the two top-level transactions (comprising nodes 530 through 560, and 580 respectively) are also for purposes of illustration only. Subtrees correspond to the child transactions within a transaction as previously stated, and thus may be nested to an arbitrary depth, with an arbitrary width, or there may be no subtrees beneath a top-level transaction, col. 9, line 1 – col. 22, line 47),

a distributed object environment based on a manager of the CORBA type (e.g., Existing object distribution techniques, such as Enterprise JavaBeans ("EJBs") and the Common Object Request Broker Architecture ("CORBA") are based on a model where the actual remote object instances reside in a server computer and the client nodes hold on to proxies which represent the remote instances in the client computer, col. 1, lines 38 – 59).

Art Unit: 2126

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rich in view of applicant's admitted prior art (AAPA).

Rich does not specifically mention about the DCOM distributed object environment.

AAPA teaches the following:

distributed object environment based on a manager of the DCOM type (e.g., any distributed object system based on an ORB, DCOM ORB, page 1, line 11 - page 3, line 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rich with the teachings of AAPA in order to facilitate implementation of a tree of distributed objects in a DCON type environment.

Conclusion

17. Examiner has found numerous arts related to the disclosed subject matter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haresh Patel whose telephone number is (703) 605-5234. The examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee, can be reached at (703) 305-8498.


Art Unit: 2126

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 306-5404.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Haresh Patel

November 12, 2003.


JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100